

IN THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph beginning at page 1, line 9, with the following rewritten paragraph as follows:

-- Digital imaging offers a great many advantages over traditional ~~analogue~~ analog techniques, supporting services such as video telephony and multi-media applications. Accordingly, digital imaging is currently the subject of extensive research.--

Please replace the paragraph beginning at page 3, line 21, with the following rewritten paragraph as follows:

-- Referring first to contrast enhancement, a well know method for enhancing contrast is histogram-based pixel mapping. In this method a pixel-mapping function is formed ~~utilising~~ utilizing a histogram of the image, or a part of an image. The histogram contains the number of pixel occurrences at each level of the input signal range. The mapping function is derived from a cumulative histogram so that it has high slope corresponding to high values in the histogram. The cumulative histogram is typically formed using an equation having the form: --

Please replace the paragraph beginning at page 11, line 16, with the following rewritten paragraph as follows:

-- This arrangement serves to ~~minimise~~ minimize the amplification of noise components, while desired signal components are enhanced. More specifically,

inverse histogram-based pixel mapping produces a reduction in contrast at signal ranges containing a large number of pixels and an increase in contrast elsewhere. Thus, noise is suppressed in e.g. uniform areas, where it is subjectively most visible. It has been found that the effect is substantially the same when inverse histogram-based pixel mapping is applied to: a) a large uniform area, and b) an area containing a large number of pixels having a small number of different values (e.g. a speckled region). --

Please replace the paragraph beginning at page 14, line 11, with the following rewritten paragraph as follows:

-- The first aspect of the present invention resides in the provision of an inverse histogram-based pixel mapping technique for enhancing a digital image. As is well known, a digital image comprises an array of pixels. In the case of a monochrome image, each pixel has a pixel value within a certain range (e.g. 0-255), which denotes the pixel's luminance. In a ~~colour~~color image, pixel values may be represented in a number of different ways. In a commonly used representation, referred to as the RGB ~~colour~~color model, each pixel is described by three values, one corresponding to the value of a Red ~~colour~~color component, another corresponding to the value of a Green ~~colour~~color component and the third corresponding to the value of a Blue ~~colour~~color component. Numerous other ~~colour~~color models exist, in which alternative representations are used. In one such alternative model, known as the YUV ~~colour~~color model, image pixels are represented by a luminance component and two chrominance or ~~colour~~color difference

components, each of which has an associated pixel value. Generally, colourcolor models that employ luminance and colourcolor difference components provide a more efficient representation of a colourcolor image than the RGB model. It is also known that the luminance component of such colourcolor models generally provides the most information about the perceived structure of an image. Therefore, application of the present invention may vary according to the colourcolor model used to represent a particular image. For example, in an image represented using the RGB colourcolor model, the method according to the invention may be applied to one, two, or all three colourcolor components. On the other hand, if an image is represented using the YUV model, it may be more efficient, for example, to apply the method according to the invention to just the Y component. However, in general, the method according to the invention can be applied to all components, or any combination (including just one) of the components of a particular colourcolor model. Thus, it should be appreciated that the choice of colourcolor model is essentially insignificant for application of the invention, as the basic principles used to construct the inverse histogram-based mapping function can be applied to any colourcolor model comprising any number of components. --